

in overawing the native races of Central Asia, with a great faith in her destiny, she had embarked on these projects of expansion without due preparation and almost in a reckless spirit. Russia urgently requires peace, reform and retrenchment, and all these grand schemes of expansion, whether eastward to the Pacific or south to the Persian Gulf, must be abandoned. The whole system of administration is corrupt, and as long as it remains so she cannot expect to prosper, however well her soldiers fight. The lessons of this war will, it is to be hoped, turn her attention to other matters than conquest.

In the course of three years our author visited the principal towns of Manchuria—Port Arthur and its docks; Dalny, the future commercial port, upon which millions have been wasted; Newchwang; Harbin, the great railway city; Mukden, the old capital; Tsitsihar, on the Nonni; Petuna; Ninguta; and Kirin, the centre of the lumber trade. All these places are admirably described, and the incidents of the journey, whether by road, rail, or river, are amusingly told. One of the most entertaining chapters of the book is that entitled "Russia's Great Manchurian General *alias* the Chinese Eastern Railway." What this railway has cost the Russian Government will probably never be known. The author estimates it at forty-five millions sterling, though others regard this as too moderate a sum, for many accidental charges have to be added to the original cost. There were the re-laying of the rails, for these at first were far too light to resist the train weights, the changing of the sleepers, the re-building of many miles of road destroyed during the Boxer troubles, new steel-bridge work, new feeder lines, the enormous administration buildings, and stone towers for guarding the line. There were the railway, sea-going and river-steamer services, the railway barracks, the railway mines, and many other offshoots belonging to the Chinese Eastern Railway Co. The railway managed as it is can never be a commercial success, yet so rich is the country through which it passes that if properly administered and in English hands it would pay a fair return on the outlay. At present it is a frightful failure, and the best thing that could happen would be for Russia to sell the whole undertaking to Englishmen—"the only men who have been able so far to handle the Chinese with real success in trade and industry."

We learn a good deal concerning the productions of Manchuria from this book—"the greatest wheat producer in the East, the greatest lumber-field and the greatest gold mining centre." Beans constitute at present the agricultural wealth of the country, but this will not remain so for long. Manchuria is a wheat country, and flour will in a few years have taken the place of beans in the export list. The climate is described as excessively cold in winter and hot in summer, but otherwise very healthy.

BRITISH ASSOCIATION MEETING AT CAMBRIDGE.

SECTIONAL ARRANGEMENTS.

IN an article published in *NATURE*, July 21, p. 277, a general account was given of the local arrangements for the forthcoming meeting. As the main items in the sectional programmes have now been settled, it may be of interest to give a short list of papers, lectures and discussions. A new feature in the sectional arrangements this year is the increased prominence given to discussions and afternoon lectures of a semi-popular character. The number of favourable replies to the usual invitation circular received from leading men of science in Britain justifies the hope that the meeting will be a thoroughly representative one.

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Invitations have been issued to an unusually large number of American and foreign men of science, and in spite of the St. Louis Exhibition and other counter attractions the committee hopes to have the pleasure of entertaining about 140 guests.

Section A (Physics).

The guests include Prof. Abraham, Göttingen; Prof. Burkhardt, Zürich; Prof. Birkeland, Christiania; Prof. Dieterici, Hanover; Prof. Kayser, Bonn; Prof. Korteweg, Amsterdam; Prof. Lummer, Charlottenburg; Prof. Langevin, Paris; Prof. Leduc, Paris; Prof. MacLennan, Toronto; Prof. Pockels, Heidelberg; A. L. Rotch, Director of the Blue Hill Observatory, U.S.A.; Prof. Rubens, Charlottenburg; Prof. Sommerfeld, Aix-la-Chapelle; Prof. Voigt, Göttingen; Prof. Volterra, Rome; Prof. Wood, Baltimore; Prof. Wien, Würzburg.

The most important items will be a discussion on the radio-activity of ordinary matter, opened by Prof. J. J. Thomson, a discussion on standard wave-lengths of light by Prof. Kayser, and one on the units used in meteorological measurements. Prof. Larmor will make a communication relating to the laws of radiation; Prof. Rubens promises a paper on "Reststrahlen" and the optical qualities of metals, and Prof. Wood will contribute papers on anomalous dispersion and colour photography. Prof. Poynting will deliver a popular afternoon address on radiation in the solar system, and on the last day of the meeting Prof. Fleming will give an address dealing with some recent advances in connection with wireless telegraphy. Dr. Glazebrook is expected to give an account of some recent work at the National Physical Laboratory, and Prof. Birkeland will make a communication on the connection between solar physics and meteorology.

Section A (Mathematics).

The guests include Prof. Bendixson, of Stockholm, and Prof. Meyer, of Königsberg.

The following papers have been arranged:—Prof. Franz Meyer, *die Ziele der Geometrie*; Sir Robert Ball, note on a special homographic transformation of screw-systems; Major MacMahon, the theory of linear partial differential equations; Prof. A. R. Forsyth, notes on the theory of groups; Prof. F. Y. Edgeworth, the law of error; Prof. F. Morley, geometry of the complex variable; Prof. Bromwich, on the roots of the characteristic equation of linear substitutions; A. N. Whitehead, Peano's symbolic method; Harold Hilton, notes on plane curves; G. H. Hardy, Taylor's series.

There will be an exhibition of geometrical models in the large room of the Cavendish Laboratory.

Section A (Astronomy and Cosmical Physics).

Dr. H. R. Mill, on the unsymmetrical distribution of rainfall about the track of a barometric depression; Miss F. E. Carr, the application to meteorology of the theory of correlation; H. N. Russell, on the masses of the stars. Papers are promised also by Father Cortie, S.J., Dr. Lockyer, H. F. Newall, and A. R. Hinks.

Section B.

The following have accepted the invitation to attend the meeting:—Prof. Aschan, Helsingfors; Prof. Brühl, Heidelberg; Prof. Busch, Erlangen; Prof. Cohen, Utrecht; Dr. Etard, Paris; Prof. Feist, Kiel; Prof. Franchimont, Leyden; Prof. Freund, Frankfurt; Prof. Guye, Geneva; Prof. Gabriel, Berlin; Comte de Gramont, Paris; Prof. Haller, Paris; Prof. Knoevenagel, Heidelberg; Prof. Meyer, Brunswick; Prof. Meyerhoffer, Berlin; Prof. Michael, Tufts College, U.S.A.; Dr. Noetting, Mülhausen; Prof. van Romburgh, Utrecht; Prof. Thiele, Strassburg; Prof. Thierfelder, Berlin; Prof. Traube, Berlin; Prof.

Tschirch, Berne; Prof. Wegscheider, Vienna; Prof. Walden, Riga; and Prof. Wollenstein, Berlin.

It is expected that the following communications will be made:—Dr. T. M. Lowry, dynamic isomerism; H. O. Jones, the stereochemistry of nitrogen; Prof. Paul Groth, on crystal structure and its relations to chemical constitution; Prof. Isidor Traube, on the velocity of osmosis and on solubility; Dr. E. A. Perman, the decomposition and synthesis of ammonia; Prof. C. Dieterici, on the energy of water and steam at high temperatures; D. L. Chapman, on the active variety of chlorine; R. S. Morrell and A. E. Bellars, the oxidation of carbohydrates by hydrogen peroxide in the presence of ferrous sulphate; R. S. Morrell and E. K. Hanson, studies in the dynamic isomerism of the α - and β -crotonic acids; F. G. Donnan, a suggested explanation of the phenomena of opalescence observed in the neighbourhood of critical series; M. le Comte Arnaud de Gramont, sur le spectre du soufre dans la photographie de l'étincelle des minéraux; H. J. H. Fenton, mesoxalic semi-aldehyde; note on the influence of radium radiations on atmospheric oxidation in presence of iron; a reaction for ketohexoses; H. J. H. Fenton and J. P. Millington, a colour reaction for methylfurfural and its derivatives; Prof. Ossian Aschan, on the pentavalent nitrogen atom; G. Barger, saponarin, a glucoside coloured blue by iodide; Dr. W. A. Bone and R. V. Wheeler, the union of hydrogen and oxygen in contact with a hot surface; Prof. Richard Meyer, the constitution of phthalein salts; G. T. Beilby, the intensification of chemical action in the neighbourhood of hot metals and other surfaces; reactions between solid salts.

Section C.

The guests include Dr. Ami, Ottawa; Prof. Brögger, Christiania; Prof. Bäckström, Stockholm; Prof. Busz, Münster; Prof. van Calker, Groningen; Prof. Groth, Munich; Prof. Goldschmidt, Heidelberg; Dr. Rothpletz, Munich; Prof. Sjögren, Stockholm; Dr. Seligmann, Coblenz.

It is expected that the following communications will be made to the section:—B. N. Peach and G. Horne, the base line of the Carboniferous system round Edinburgh; G. W. Lamplugh, note on Lower Cretaceous phosphatic beds and their fauna; H. B. Woodward, note on a small anticline in the Great Oolite series north of Bedford; P. F. Kendall, evidence in the Secondary rocks of persistent movement in the Charnian Range; Dr. Ami, the geological resources of Canada; E. Greenly, the lava domes of the Eifel; A. Harker, exhibition of Tertiary plutonic rocks from the Isle of Rum; Prof. Busz, notes on some Cornish rocks; Prof. Bäckström, origin of the great iron-ore deposits of Lapland; L. J. Spencer, on the different modifications of zircon; F. W. Harmer, the Great Eastern Glacier; Rev. W. Lower Carter, glaciation of the Don and Dearne valleys; E. Greenly, notes on the glaciation of Holyhead Mountain; W. Whitaker, on a great depth of drift in the valley of the Stour, Suffolk, and some Cambridgeshire wells; Rev. W. Lower Carter, river captures in the Don system; Rev. O. Fisher, on the elephant trench at Dewlish, Dorset; Prof. W. J. Sollas, on the structure of the Silurian Ophiurid, *Lapworthura miltoni*; E. A. Newell Arber, on the fossil plants of the Upper Culm Measures of Devon and on derived plant petrifications from Devonshire.

There will be a discussion on the nature and origin of earth movements, opened by the president (A. Strahan), Dr. Teall, Prof. Sollas and G. Horne. Dr. Marr will give a lecture on the geology of Cambridge-shire.

Section D.

Acceptances have been received from the following zoologists:—Prof. Boveri, Würzburg; Dr. Calkins, New York; Prof. Hubrecht, Utrecht; Prof. Keibel, Freiburg; Prof. Minot, Cambridge, U.S.A.; Prof. Osborn, New York; Dr. Przibram, Vienna; Prof. W. B. Scott, Princetown; Prof. Max Weber, Amsterdam; Prof. Ramsay Wright, Toronto; and Prof. E. B. Wilson, New York.

On Thursday afternoon Prof. Osborn, of New York, will open a discussion on recent contributions to the evolution of the horse. The discussion will be continued by Prof. Cossar Ewart and Prof. Ridgeway. On Friday there will be a discussion on heredity, in which the following have promised to take part:—The president (W. Bateson), Miss Saunders, and Messrs. A. D. Darbishire, Hurst, Biffen, Doncaster, Lock and Staples-Browne. In connection with this discussion there will be an exhibition of animals and plants in illustration of the several contributions. Monday morning will be devoted to a joint discussion with Section K on the significance of the reduction division of the nucleus, in which Profs. Calkins, E. B. Wilson and others are expected to take part. In the afternoon of Monday Prof. Przibram and Mr. Brindley will open a discussion on regeneration and asymmetry. Mr. Keeble will deliver a popular lecture on the coloration of marine Crustacea. On Tuesday afternoon Dr. C. W. Andrews will give a lecture on Egyptian Eocene vertebrates and their relationships, particularly with regard to the geographical distribution of allied forms.

The sectional programme includes also papers by Prof. Keibel and Prof. Calkins on the Cytoryctes, the protozoan said to be the organism of small-pox; G. H. F. Nuttall, on the precipitation tests in the study of animal relationships; Prof. Graham Kerr, on the African collections of the late J. S. Budgett; J. W. Jenkinson, on the origin of the cleavage centrosomes in the axolotl egg; J. H. Bryce, on the histogenesis of the blood of the lepidosiren larva; Prof. Elliot Smith, on Loos's researches on Ankylostoma (the miner's worm), which he has studied in Egypt.

Section E.

The foreign visitors include M. de Déchy, Odessa; Prof. Hettner, Heidelberg; and Dr. Wind, Utrecht.

Popular afternoon lectures will be delivered by Mr. A. Silva White on scenes and sketches of life in the Nile Valley, and by Dr. Tempest Anderson on the Lipari Islands and their volcanoes. The list of papers includes the following:—(a) *Travel*: Major Burden, people and places in Nigeria; A. W. Hill, a journey round Lake Titicaca; Colonel Delmé Radcliffe, surveying in Western Uganda; Dr. von Drygalski, the German Antarctic Expedition. It is hoped that Mr. Bruce, of the Scottish Antarctic Expedition, may be able to attend the meeting. (b) *Historical Geography*: Rev. H. S. Cronin, Ptolemy's map of Asia Minor, methods of construction; D. G. Hogarth, Cyrene—an illustration of the bearing of geography on history; C. R. Beazley, the first true maps (Portolani of the early fourteenth century); Rev. A. Hunt, the site of the battle of Brunanbush (Lincolnshire) in the tenth century; H. Yule Oldham, changes in the features of the Fen district. *Physical Geography*: M. Déchy, the glaciers of the Caucasus; M. C. Rabot, glacier-bursts; Dr. H. R. Mill, a new physical map of Great Britain; Prof. Yapp, vegetative features of the Fen district; F. J. Lewis, botanical survey of parts of Westmorland; R. T. Günther, changes in the coast-line in the Bay of Naples. There will also be a paper by Major Close, R.E., on recent improvements in survey methods.

Section F.

The following have signified their intention of being present:—Prof. Dietzel, Bonn; M. Yves Guyot, Paris; Dr. Körösi, Budapest; Prof. Lotz, Munich; Prof. Mahaim, Liège; Dr. Mandello, Budapest; Dr. Pierson, the Hague.

The following papers have been arranged in connection with this section:—Prof. Flux, on improvements in agriculture and their effect on economic rent; Prof. Edgeworth, a moot point in the theory of international trade. Friday, August 19, will be devoted to a discussion on the theory and practice of foreign trade at home and abroad. Contributions will be made by Prof. Dietzel, Prof. Lotz, M. Yves Guyot, and L. L. Price. It is hoped that most of the leading English economists will be present. On Monday Mrs. Bosanquet will read a paper on the economic importance of the family, and there will possibly be a communication on cotton-growing in the Empire. In the afternoon of Friday, August 19, some members of the section will visit the Garden City near Hitchin. Among other papers may be mentioned those by J. A. Baines, distribution of rural population in India; T. C. Horsfall and Mrs. Fisher, on the housing question, and possibly a communication on some allied questions by His Excellency Dr. Pierson. It is expected that the programme will include the following additional items:—Prof. Mahaim, changes in Belgian wages; A. L. Bowley, measurement of national progress; C. J. Hamilton, trade unions in the United States of America; H. A. Roberts, employment of graduates; and W. G. Adams, modification of the income tax.

Section G.

Prof. Schröter, of Munich, is expected to attend the meeting. After the presidential address the most important items of the programme are a discussion on internal combustion engines, opened by Mr. C. Dugald Clark and Prof. B. Hopkinson. On Thursday afternoon Mrs. Ayrton will give a lecture on the origin of sand-ripples, illustrated by experiments which were recently shown at a conversazione at the Royal Society. On Monday, August 22, papers will be read by C. H. Merz on the use of electricity on the North-Eastern Railway and on Tyneside; A. A. Campbell Swinton, electricity from water-power; W. M. Morley and A. G. Hansard, energy losses in magnetising iron; Prof. J. A. Fleming, large bulb incandescent lamps as secondary standards of light. The following communications have been arranged for Tuesday, August 23:—Major Sir Hanbury Brown, K.C.M.G., on the Nile irrigation problem; J. H. Wicksteed, a universal testing-machine of 300 tons for full-sized members of structures; S. Cowper Coles, a new process for applying zinc to metallic surfaces; J. W. Hayward, the effects of receiver drop in a compound engine.

Section H.

The guests who have accepted the invitation to attend connected with this section include Prof. Deussen, of Kiel; Mr. Howitt, Australia; Prof. Kabbadies, Athens; Prof. Montelius, Stockholm; Prof. Schmidt, Copenhagen; and Dr. R. Livi, Rome.

The address of the president (Mr. Henry Balfour) will be delivered on Thursday at 10.30, and will deal with the theory of evolution in the material arts, as expounded by the late General Pitt-Rivers, and illustrated in the Pitt-Rivers Museum at Oxford. The same subject will be pursued by Prof. Montelius, of Stockholm, in a study of the evolution of the lotus-ornament, by Prof. Flinders Petrie in regard to the series of Roman lamps discovered in this season's excavations at Ekhnasya, in Egypt, and by Mr. R. T. Günther in a paper on the *Timaruta* charms from Naples.

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Friday's session will be devoted to papers on anthropological surveys, actual and projected, in various parts of the world. Special stress will be laid by Prof. D. J. Cunningham, Mr. J. Gray, Mr. F. C. Shrubbsall, and others on the practical value of such surveys of the physical characters of a complex modern population in providing data for inquiries of hygienic, economic, and even political nature; and a discussion is arranged on the best means of organising such surveys, with special reference to the work of the committee on physical deterioration, the report of which is, fortunately, now available for consideration.

Another important discussion, also set down provisionally for Friday, deals with the report of the committee on the present state of anthropological teaching.

Monday will be devoted to papers: on social and religious institutions, and on folklore, and to a discussion of Sir Richard Temple's method of recording the languages of savages.

Tuesday's programme deals with recent work in Greek lands, with papers by Dr. Arthur Evans, Miss Boyd, and Messrs. Bosanquet and Dawkins, on their respective excavations in Crete; and with a demonstration by Prof. Montelius on the geometrical period in Greece. Other archaeological papers deal with recent excavations on prehistoric sites in Denmark, Scotland, and elsewhere.

The papers hitherto received on points of human anatomy are of less popular interest and will probably be discussed by a subsection on one of the days of the meeting, to be announced later.

Section I.

The following American and foreign physiologists hope to be present at the meeting:—Prof. Atwater, Middletown, U.S.A.; Dr. Asher, Berne; Prof. Adamkiewicz, Cracow; Prof. Boruttau, Göttingen; Prof. Biedl, Vienna; Fräulein Bienenfeld, Vienna; Dr. Barbieri, Paris; Dr. Camus, Paris; Prof. Cavazzani, Ferrara; Prof. Dupuy, Paris; Prof. Donaldson, Chicago; Prof. Fröhlich, Vienna; Prof. Gley, Paris; Prof. van Gehuchten, Louvain; Prof. Johannson, Stockholm; Prof. Kossel, Heidelberg; Prof. Munk, Berlin; Prof. Magnus, Heidelberg; Prof. Mareš, Prague; Prof. Macallum, Toronto; Prof. Nicloux, Paris; Prof. Porter, Cambridge, U.S.A.; Prof. Stewart, Chicago; Dr. Veress, Würzburg; Prof. Verworn, Göttingen; Dr. Vaschide, Paris; Prof. Wedenskii, St. Petersburg.

The organising committee has introduced two items which it is hoped will prove of considerable interest. Prof. Atwater will give a lecture entitled "Nutrition Experiments on Man in the United States." The lecture will include an account of the laborious researches carried on at Middletown, U.S.A., under the auspices of the United States Government. The lecture will be of an entirely popular character, and Prof. Atwater will deal not only with the strictly physiological, but also with the economic aspect of the subject. He will treat of such problems as the feeding of the very poor in large cities. The second new feature will be a couple of discussions of a highly technical nature—oxidation and functional activity, and conduction and structure in the nerve-cell and nerve-arc. The discussions will be opened by Sir John Burdon-Sanderson and Prof. Langley respectively. There will also be a number of papers on physiological subjects, and on Saturday morning two sittings will take place simultaneously, one being devoted to pathology and the other to experimental psychology and the special senses.

Section K (Botany and Agriculture).

The following botanical guests are expected:—Prof. Bertrand, Lille; Prof. Borzi, Palermo; Prof. Chodat, Geneva; Prof. Czapek, Prague; M. de Candolle,

Geneva; Prof. Engler, Berlin; Prof. Errera, Brussels; Prof. Eriksson, Stockholm; Prof. Fujii, Tokio; Mlle. Goldflus; Prof. Klebs, Halle; Dr. Lotsy, Leyden; Prof. Macfarlane, Philadelphia; Dr. Overton, Würzburg; Prof. Pierce, Stanford University, California; Prof. Reinke, Kiel; Prof. Schröter, Zurich; Dr. Schoute, Wageningen; Prof. de Toni, Modena; Prof. Vöchting, Tübingen; Mme. Weber van Bosse, Amsterdam; Prof. Zacharias, Hamburg.

Mr. Francis Darwin's presidential address will deal with the statolith theory of geotropism, being a discussion of the recent work on the means by which plants "perceive" the force of gravity. The semi-popular lecture, which in recent years has become one of the features of the section, will be given on Monday afternoon, at 2.30 p.m., by Dr. D. H. Scott. Prof. H. Marshall Ward and Prof. Jakob Eriksson, of Stockholm, will discuss their recent important researches on the biology of the fungi, especially the Uredineæ. The structure of the Cyanophyceæ will be dealt with by Prof. Zacharias, of Hamburg, Prof. Chodat, of Geneva, and others. Dr. J. P. Lotsy, of Leyden, has promised to give an account of the virgin woods of Java, and Prof. S. H. Vines will read a paper on the proteases of plants. Dr. F. F. Blackman will give an account, illustrated by experiments, of his important researches on assimilation and respiration; Prof. A. G. Tansley will give an address on some problems of ecology, followed by papers on various aspects of ecological botany by Prof. Engler, of Berlin, Dr. W. G. Smith, and Messrs. T. W. Woodhead and F. T. Lewis. Papers will be contributed to this section also by Profs. Czapek, Vöchting, G. Pierce, C. E. Bertrand, Dr. Margaret Stopes, Miss Sibille Ford, Prof. Hartog, Dr. W. G. Lang, E. A. Newell Arber, J. Parkin, Dr. A. Reginald Buller, Alfred P. Maudslay, Harold A. Wager, G. Barger and others.

For the first time in the history of the Association there will be a subsection devoted to agriculture, presided over by Dr. W. Somerville.

The following communications have been promised:—A. D. Hall (Rothamsted Experimental Station), the probable error of agricultural field experiments, and analysis of the soil by means of the plant; T. S. Dymond (County Laboratories, Chelmsford), the influence of sulphate as manure upon the yield and feeding value of crops, and the determination of the availability of insoluble phosphate in manures; R. H. Biffen, the improvement of wheats and Mendel's laws; R. H. Elliot, the clover mystery—a probable solution of it; Prof. Middleton, improvement of clay pastures through the agency of clovers; T. B. Wood and R. A. Berry, chemical composition of root crops.

Section L.

The visitors to this section include Dr. Anderssen, Christiania; M. Demolins, La Guichardière; Prof. Dewey, Chicago; Dr. Gallander, Örebro; Miss Laura Drake Gill, Barnard College, Columbia University, New York; M. A. Gobert, Brussels; M. Hovelague, Paris; Dr. Hausknecht, Kiel; Miss Hazard, president of Wellesley College, U.S.A.; Miss Irwin, Dean of Radcliffe College, Cambridge, U.S.A.; Fräulein Knittel, Breslau; Prof. Mangold, Berlin; Prof. Münch, Berlin; Mme. Dick May, Paris; Miss Oakley, Montreal; Director Trüper, Jena; Fröken Whitlock, Djursholm, Sweden; Miss M. A. Willcox, professor at Bryn Mawr, U.S.A.

One of the chief debates in Section L will be on the subject of school-leaving certificates, with special reference to the scheme proposed by the consultative committee of the Board of Education. Other important subjects selected for discussion are the national and

local provision for the training of teachers, and manual instruction in its broadest sense. Afternoon semi-popular talks will probably be given by A. D. Hall, director of the Lawes Agricultural Trust, on the need of scientific method in elementary rural instruction, and by Prof. Armstrong on the research method applied to experimental teaching.

The above summary is based on the facts supplied by the recorders of the several sections.

Tickets and programmes of local arrangements may now be obtained on application to the local secretaries, Emmanuel College, Cambridge.

SIR JOHN SIMON, K.C.B., F.R.S.

BY the death of Sir John Simon, which occurred on July 23, in his eighty-eighth year, this country has lost one of the leaders in sanitary science who with Chadwick and others made the Victorian period a memorable one. Simon commenced the study of medicine in 1833, when he was seventeen years old, and attended both St. Thomas's Hospital and the recently established King's College. Here he studied under Joseph Henry Green, the first professor of surgery at the last-named college, and acted as assistant to Todd in preparation for his physiological lectures. On the foundation of King's College Hospital in 1840, Simon became senior assistant surgeon, being associated with men so well known as Fergusson, Partridge and Bowman. It was in 1848 that he turned his attention to that branch of medicine in which his name became famous. The Corporation of the City of London applied to Parliament for powers to improve the sanitary administration of the City, and as the result of the passing of the City Sewers Act he was appointed Medical Officer of Health. About this time the epidemic recurrence of cholera in this and other countries began to attract attention, and in 1855 it was decided to create a Central Board of Health, for the medical officership of which Simon was selected. In 1858 the functions of the Board were transferred to the Privy Council. This position made him adviser to the Government on all sanitary and medical matters, and he continued to act until 1876, when he resigned his appointment, and on his retirement the decoration of C.B. was conferred on him. On the occasion of Queen Victoria's Jubilee in 1887 he was created a K.C.B. In 1867 he was appointed a Crown member of the General Medical Council, and took an active part in the work of that body until 1895.

The effect of Simon's work as Medical Officer of Health was far more than local; his annual reports, which cover the years 1848 to 1855, form a landmark in the history of English sanitation; they survey the sanitary condition of the City, review the risks arising from cholera and other infective diseases, detail the evils of overcrowding, and direct attention to a condition of affairs which until then had escaped notice. In 1853 he was appointed one of the commissioners to inquire into the outbreak of cholera at Gateshead and Newcastle, and in 1856 submitted a report on the outbreaks of that disease in London in 1848-49 and in 1853-54, conclusively demonstrating the dependence of these epidemics on a polluted water supply. In 1857 he published a volume entitled "Papers on the History and Practice of Vaccination," which was followed in 1858 by the "Report on the Sanitary State of the People of England," which demonstrated for the first time the wide variations which exist in the local incidence of certain diseases and emphasised the need for skilled inquiry. During his term of office under the Privy Council the results of a number of